

# MUHANDISLIK

## & IQTISODIYOT

### №4 (2)

ijtimoiy-iqtisodiy, innovatsion texnik,  
fan va ta'limga oid ilmiy-amaliy jurnal

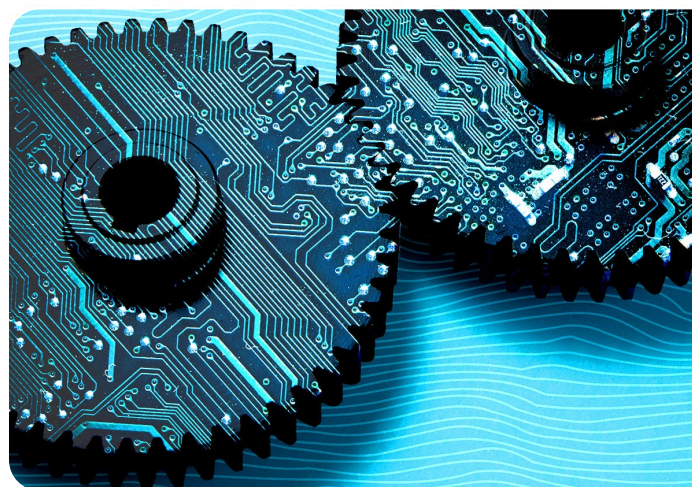
2026  
APREL



Milliy nashrlar

OAK: <https://oak.uz/pages/4802>

05.00.00 - Texnika fanlari  
08.00.00 - Iqtisodiyot fanlar



ISSN: 3060-463X



# **muhandislik** **& iqtisodiyot**

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- 05.01.00 – Axborot texnologiyalari, boshqaruv va kompyuter grafikasi
- 05.01.01 – Muhandislik geometriyasi va kompyuter grafikasi. Audio va video texnologiyalari
- 05.01.02 – Tizimli tahlil, boshqaruv va axborotni qayta ishlash
- 05.01.03 – Informatikaning nazariy asoslari
- 05.01.04 – Hisoblash mashinalari, majmualari va kompyuter tarmoqlarining matematik va dasturiy ta'minoti
- 05.01.05 – Axborotlarni himoyalash usullari va tizimlari. Axborot xavfsizligi
- 05.01.06 – Hisoblash texnikasi va boshqaruv tizimlarining elementlari va qurilmalari
- 05.01.07 – Matematik modellashtirish
- 05.01.11 – Raqamli texnologiyalar va sun'iy intellekt
- 05.02.00 – Mashinasozlik va mashinashunoslik
- 05.02.08 – Yer usti majmualari va uchish apparatlari
- 05.03.02 – Metrologiya va metrologiya ta'minoti
- 05.04.01 – Telekommunikatsiya va kompyuter tizimlari, telekommunikatsiya tarmoqlari va qurilmalari. Axborotlarni taqsimlash
- 05.05.03 – Yorug'lik texnikasi. Maxsus yoritish texnologiyasi
- 05.05.05 – Issiqlik texnikasining nazariy asoslari
- 05.05.06 – Qayta tiklanadigan energiya turlari asosidagi energiya qurilmalari
- 05.06.01 – To'qimachilik va yengil sanoat ishlab chiqarishlari materialshunosligi
- 05.08.03 – Temir yo'l transportini ishlatish
- 05.08.06 – "G'ildirakli va gusenisali mashinalar va ularni ishlatish" (texnika fanlari)
- 05.09.01 – Qurilish konstruksiyalari, bino va inshootlar
- 05.09.04 – Suv ta'minoti. Kanalizatsiya. Suv havzalarini muhofazalovchi qurilish tizimlari
- 10.00.06 – Qiyosiy adabiyotshunoslik, chog'ishtirma tilshunoslik va tarjimashunoslik
- 10.00.04 – Yevropa, Amerika va Avstraliya xalqlari tili va adabiyoti
- 08.00.01 – Iqtisodiyot nazariyasi
- 08.00.02 – Makroiqtisodiyot
- 08.00.03 – Sanoat iqtisodiyoti
- 08.00.04 – Qishloq xo'jaligi iqtisodiyoti
- 08.00.05 – Xizmat ko'rsatish tarmoqlari iqtisodiyoti
- 08.00.06 – Ekonometrika va statistika
- 08.00.07 – Moliya, pul muomalasi va kredit
- 08.00.08 – Buxgalteriya hisobi, iqtisodiy tahlil va audit
- 08.00.09 – Jahon iqtisodiyoti
- 08.00.10 – Demografiya. Mehnat iqtisodiyoti
- 08.00.11 – Marketing
- 08.00.12 – Mintaqaviy iqtisodiyot
- 08.00.13 – Menejment
- 08.00.14 – Iqtisodiyotda axborot tizimlari va texnologiyalari
- 08.00.15 – Tadbirkorlik va kichik biznes iqtisodiyoti
- 08.00.16 – Raqamli iqtisodiyot va xalqaro raqamli integratsiya
- 08.00.17 – Turizm va mehmonxona faoliyati

Ma'lumot uchun, OAK  
Rayosatining 2024-yil 28-avgustdagi 360/5-son qarori bilan "Dissertatsiyalar asosiy ilmiy natijalarini chop etishga tavsiya etilgan milliy ilmiy nashrlar ro'yxati"ga texnika va iqtisodiyot fanlari bo'yicha "Muhandislik va iqtisodiyot" jurnali ro'yxatga kiritilgan.

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# MUNDARIJA

BYUDJET SUBYEKTLARI ISHTIROKINI QISQARTIRISH ASOSIDA KREDIT RISKINI BOSHQARISH SAMARADORLIGINI OSHIRISH.....	16
<b>PhD. Mahmudov Rahimjon Hamid o'g'li</b>	
MINTAQA IQTISODIYOTI TARMOQLARINI KLASTERLASHTIRISH SALOHIYATINI RIVOJLANTIRISHNI TAKOMILLASHTIRISHNING EMPIRIK MODEL: STATISTIK VA EKONOMETRIK TAHLIL.....	25
<b>Ollokulova Feruza Mansurovna, Abdurahmonov Abdulaziz Maxmudovich</b>	
XO'JALIK YURITUVCHI SUBYEKTLARDA PUL OQIMLARI AUDITINI TAKOMILLASHTIRISHNING ZAMONAVIY MEXANIZMLARI.....	30
<b>Atamurodov Saidmurad Yaxyoyevich, Sindarova Aziza Musurmon qizi</b>	
TIJORAT BANKLARIDA KREDIT RISKLARINI BOSHQARISHNI RAQAMLI TEXNOLOGIYALAR VA SUN'IY INTELLEKT ASOSIDA TAKOMILLASHTIRISH.....	42
<b>Xasanov Sardor Xazratkulovich</b>	
IQTISODIY O'SISH SIFATI VA UNI KO'RSATKICHLARINING KONSEPTUAL ASOSLARI.....	50
<b>Axmedov Xasanjon Muxamadovich</b>	
IQTISODIY O'SISH SIFATI VA UNI KO'RSATKICHLARINING KONSEPTUAL ASOSLARI.....	55
<b>Axmedov Xasanjon Muxamadovich</b>	
ENERGIYA SAMARADORLIGINI OSHIRISHNING KORXONALAR RENTABELLIGIGA TA'SIRI.....	60
<b>Hayitov Jamshid Xolboyevich</b>	
KREDITLASH MEXANIZMINING ILMIY-NAZARIY ASOSLARI VA UNING TARIXIY RIVOJLANISH BOSQICHLARI.....	65
<b>Ortiqov Husan Usmonaliyevich</b>	
DAVLAT SEKTORIDA ICHKI AUDIT FAOLIYATINI TAKOMILLASHTIRISH.....	70
<b>Xamidova Zarifa Urol qizi</b>	
ISTE'MOL NARXLARI INDEKSINI MODELLASHTIRISH VA PROGNOZLASHNI TAKOMILLASHTIRISH YO'NALISHLARI.....	74
<b>Ismailova Shaxnoza Uktamovna</b>	
XIZMATLAR SEKTORI RIVOJLANISHINING KAMBAG'ALLIKKA TA'SIRINI BAHOLASH METODOLOGIYASI VA KO'RSATKICHLAR TIZIMI.....	77
<b>Dawletmuratov Adilbay Mirzaboyevich</b>	
BIZNES JARAYONLARINI MONITORING QILISH TIZIMINING HOZIRGI HOLATI TAHLILI.....	84
<b>Dadajonova Madina Ravshan qizi</b>	
ISTE'MOL NARXLARI INDEKSINI MODELLASHTIRISH VA PROGNOZLASHNI TAKOMILLASHTIRISH YO'NALISHLARI.....	89
<b>Ismailova Shaxnoza Uktamovna</b>	
MINTAQA IQTISODIYOTI TARMOQLARINI KLASTERLASHTIRISH SALOHIYATINI RIVOJLANTIRISHNI TAKOMILLASHTIRISHNING EMPIRIK MODEL: STATISTIK VA EKONOMETRIK TAHLIL.....	94
<b>Ollokulova Feruza Mansurovna, Abdurahmonov Abdulaziz</b>	
ENERGIYA SAMARADORLIGINI OSHIRISHNING KORXONALAR RENTABELLIGIGA TA'SIRI.....	100
<b>Hayitov Jamshid Xolboyevich</b>	
IMPROVING THE EFFICIENCY OF BANKS' GREEN FINANCING IN UZBEKISTAN AND KAZAKHSTAN.....	105
<b>Maxmudov Rahimjon</b>	
MAHALLIY BUDJETLAR MUSTAQILLIGINI TAKOMILLASHTIRISH VA YANADA OSHIRISH.....	109
<b>Abduraxmonova Gulmira</b>	
RAQAMLI IQTISODIYOT SHAROITIDA MOLIVAVIY HISOBOTLARNI SHAKLLANTIRISH: MUAMMOLAR VA YECHIMLAR.....	114
<b>Teshabayev Dilmurod Boxodir o'g'li</b>	



FARG 'ONA VILOYATINING INNOVATSION RIVOJLANISHI.....	120
<b>Tuychieva Odina Nabiyeвна</b>	
INDICATORS OF INNOVATIVE DEVELOPMENT OF THE "GREEN" ECONOMY.....	131
<b>Mirzaev Kulmamat Djanzakovich</b>	
KREDITLASH MEXANIZMINING ILMIY-NAZARIY ASOSLARI VA UNING TARIXIY RIVOJLANISH BOSQICH LARI.....	140
<b>Ortiqov Husan Usmonaliyevich</b>	
KORPORATIV BOSHQARUVNING XALQARO TAJRIBASI VA UNING QIYOSIY TAHLILI.....	144
<b>Shakirova Gulbaxor Sharipdjanovna</b>	
TIJORAT BANKLARIDA KREDIT RISKLARINI BOSHQARISHNI RAQAMLI TEXNOLOGIYALAR VA SUN'IY INTELLEKT ASOSIDA TAKOMILLASHTIRISH.....	149
<b>Xasanov Sardor Xazratkulovich</b>	
IQTISODIY XAVFSIZLIKNING INSTITUSIONAL ASOSLARINI TAKOMILLASHTIRISHNING XORIJ DAVLATLAR TAJRIBASI.....	156
<b>Odinayev Ravzatullo Asatulloevich</b>	
KICHIK BIZNES SUBYEKTLARINING MOLIVAVIY XAVFSIZLIGINI TA'MINLASH MEXANIZMLARINI TAKOMILLASHTIRISH.....	161
<b>Karimov Alibek Valievich</b>	
RAQAMLI IQTISODIYOT SHAROITIDA FRANCHAYZING TIZIMINI RIVOJLANTIRISHDA PLATFORMA MODELLARI VA ULARNING SAMARADORLIGINI BAHOLASH.....	167
<b>Xodjayeв Anvar Rasulovich, Nasimov Dilshodbek Hotam o'g'li</b>	
"O'ZBEKISTON GTL" MAHSULOTLARINING FIZIK-KIMYOVIY XOSSALARI VA ULARNI KOMPOUDIRLASH ASOSIDA EKOLOGIK TOZA YOQILG'ILAR OLIISH ISTIQBOLLARI.....	173
<b>Ro'ziyev Aliakbar, Hayitov Ruslan, Mavlonov Shohrux</b>	
HUDUDIY MEHNAT BANDLIGINI TA'MINLASHDA AVTOSERVIS KORXONALARINING ROLI.....	179
<b>Marqayev Xurshid Aliqulovich</b>	
ASOSIY VOSITALAR AUDITINI TAKOMILLASHTIRISH.....	183
<b>Zaripova Sayohat Zafarovna</b>	
XIZMATLAR SOHASINI BOSHQARISHDAGI MUAMMOLAR VA YECHIMLAR: AGROTURIZM VA RAQAMLI XIZMATLAR ASOSIDA TAHLIL (ANDIJON VILOYATI MISOLIDA).....	188
<b>Oktamjonova Gulira'no Ikromjon qizi</b>	
BUXORO VILOYATI UY XO'JALIKLARI HAYOT SIFATI VA IJTIMOIIY-IQTISODIY AHVOLI: SO'ROVNOMA NATIJALARI TAHLILI.....	192
<b>Nizomov Asliddin, Musulmonova Shahlo, Izzatullayeva Ma'mura</b>	
DIRECTIONS FOR TOURISM DEVELOPMENT IN UZBEKISTAN BASED ON DIGITAL TECHNOLOGIES..	199
<b>Mirzaev Kulmamat Djanzakovich</b>	
QORA METALLURGIYA SANOATI VA ULARNING ISHLATILISHI.....	203
<b>Sarimsakov Alisher Ubaydullaevich</b>	
O'ZBEKISTON RESPUBLIKASIDA AHOLI BANDLIGINING IQTISODIY-STATISTIK TAHLILI.....	209
<b>Yusupov Farhod Adamboyevich</b>	
TASVIRLARDAN YO'L BELGILARINI TANIB OLIISH ALGORITMLARI VA DASTURIY VOSITASINI ISHLAB CHIQISH.....	214
<b>Toyirov Akbar Xasanovich, Yuldoshov Abdurahmon Baxtiyorovich</b>	
OLIIY TA'LIMNI MOLIVALASHTIRISHNING ILG'OR XORIJIY TAJRIBASI: SINGAPUR MISOLIDA.....	218
<b>Kurbanov Baxodir Negmatullayevich</b>	



MA'LUMOTLARGA ASOSLANGAN TURIZM BOSHQARUVI: O'ZBEKISTONDA RAQAMLI TRANSFORMATSIYA JARAYONLARI.....	222
<b>Ashurova Shaxnoza Almasovna</b>	
DAVLAT XARIDLARI BO'YICHA BYUDJET MABLAG'LARIDAN FOYDALANISH SAMARADORLIGINI ICHKI AUDITNING ANALITIK KO'RSATKICHLARI ASOSIDA BAHOLASH.....	226
<b>Meliboyev Askar Eshmuratovich</b>	
ГЛИНИСТЫЕ СЛАНЦЫ ЦЕНТРАЛЬНОГО И ЮЖНОГО УЗБЕКИСТАНА КАК СЫРЬЕВАЯ СМЕСЬ ДЛЯ ПРОИЗВОДСТВА ПОРТЛАНДЦЕМЕНТА.....	231
<b>Карабаев А.М., Абдуллаева Д.Ф., Абдуллаев У.Х. Андакулова Н.Н.</b>	
ЦИФРОВАЯ ТРАНСФОРМАЦИЯ СИСТЕМЫ МЕНЕДЖМЕНТА КАЧЕСТВА НА ПРОМЫШЛЕННОМ ПРЕДПРИЯТИИ.....	237
<b>Садиков Жaxonгир Носирджанович, Даулетмуратова Дилбар Калмуқанмед кизи</b>	
РАЗРАБОТКА МЕХАТРОННОГО МОДУЛЯ ДЛЯ ВЫРАВНИВАНИЯ ПОВЕРХНОСТИ МЕТАЛЛА ПОСЛЕ ЗАЛИВКИ.....	243
<b>Мирджуроев Сарвар Алишер угли</b>	
MAHALLIY BUDJET DAROMADLARINI SHAKLLANTIRISHDA YASHIRIN IQTISODIYOTNING TA'SIRI ..	246
<b>Isoqov Zafarjon Zokirjonovich</b>	
AGROKLASTERLAR SAMARADORLIGINI OSHIRISHNING EKONOMETRIK MODELLARI .....	250
<b>O'rinboev Ulug'bek Otabekovich</b>	
ИССЛЕДОВАНИЕ ПОРИСТОЙ СТРУКТУРЫ И ВЛАГОПОГЛОЩАЮЩИХ СВОЙСТВ КОМПОЗИТНОГО ВЯЖУЩЕГО .....	259
<b>Тургунбаев Уринбек, Шарипова Дилафруз, Худойбердиев Жамшид</b>	
ИССЛЕДОВАНИЕ НАПРЯЖЕННО-ДЕФОРМИРОВАННОГО СОСТОЯНИЯ ЯЧЕЙКИ СВЕТОПРОЗРАЧНОГО ОГРАЖДЕНИЯ ПРИ ВОЗДЕЙСТВИИ ЛОКАЛЬНОЙ СЕЙСМИЧЕСКОЙ НАГРУЗКИ.....	265
<b>Давронов Олимбек, Туляганов Азиз</b>	
PAHTA-TO'QIMACHILIK KLASTERLARNING EKSPORT SALOHİYATINI OSHIRISH YO'NALISHLARI .....	271
<b>Mamasoliyev G'ayratbek Maxamadyusupovich</b>	
RAQAMLI IQTISODIYOTNING TURIZMDA MOHIYATI VA AHAMIYATI.....	276
<b>Abdullayeva Zulfiya Izzatovna</b>	
MINTAQAVIY SANOAT KORXONALARINING BIZNES JARAYONLARINI TAHLIL QILISH VA BAHOLASHNING ZAMONAVIY USULLARI (BPM, LEAN VA SIX SIGMA YONDASHUVLARI MISOLIDA) ..	279
<b>Azimova Maxfuza Rashidovna</b>	
QURILISH SANOATI KORXONALARINING O'ZIGA XOS XUSUSIYATLARI VA ULARNI EKOLOGIK BOSHQARISH TAMOIYILLARI .....	284
<b>Xolov Xamza Tojiddinovich</b>	
O'ZBEKISTONDA AHOLINI QISHLOQ XO'JALIGI MAHSULOTLARI BILAN TA'MINLASHNING IQTISODIY MEKANIZMLARINI TAKOMILLASHTIRISH: EKONOMETRIK TAHLIL VA PROGNOZLASH .....	292
<b>Matjonov Bekjon Ravshonbekovich, Ibragimova Nodira Kadamovna</b>	
A THEORETICAL MODEL LINKING GENDER EQUALITY AND MANAGEMENT EFFICIENCY.....	297
<b>Ochilova Intizor Sadikovna</b>	
QIMMATLI QOG'OZLAR PORTFELIDAN KUTILAYOTGAN DAROMADGA TA'SIR QILUVCHI OMILLARNI EKONOMETRIK MODEL ORQALI BAHOLASH.....	303
<b>Sindarov Fazliddin Kaxramonovich</b>	
MAMLAKAT KIMYO SANOATIDAGI KORXONALAR FAOLIYATIDA RESURSLARDAN SAMARALI FOYDALANISH JARAYONI VA ULARNING TAHLILI.....	312
<b>Odilova Malika Abdushukur qizi</b>	



RAQAMLI TEXNOLOGIYALARNI ISHLAB CHIQRISH SANOATIGA JORIY ETISH .....	317
<b>Abdivoyitova Sarvinoz Abduxayit qizi, Maxmudov Abrorxon Axmadxonovich</b>	
NODAVLAT OLIY TA'LIM MUASSASALARIDA BOSHQARUV HISOB TIZIMINI TASHKIL ETISHNING NAZARIY VA AMALIY JIHATLARI .....	321
<b>Xojiboyev Muxiddin Shodimuxamedovich</b>	
TIJORAT BANKLARINING INVESTITSION FAOLIGINI OSHIRISHNING HOZIRGI HOLATI TAHLILI.....	326
<b>Dagarov Bekzod Muzaffar o'g'li</b>	
O'ZBEKISTON BANK TIZIMIDA RAQOBAT MUHITINING SHAKLLANISH BOSQICHLARI VA TENDENSIYALARI.....	332
<b>Qulmetov Mansurbek Ro'zmatovich</b>	
USING ENGINEERING MODELS TO MEASURE SME RISKS IN UZBEKISTAN.....	340
<b>Djumabayeva Dilobar Asatillayevna</b>	
BANK FAOLIYATIDA RAQAMLI TEXNOLOGIYALARNI JORIY ETISHNING ASOSIY MASALALARI.....	347
<b>Yusufov Javohirtshoh Ozod o'g'li, Xolmirzayev Elbek Baxtiyorovich</b>	
RAQAMLI TEXNOLOGIYALAR JARAYONIDA TALABALARNING IJODKORLIK KOMPETENTLIGINI RIVOJLANTIRISH METODIKASINI TAKOMILLASHTIRISH.....	353
<b>Meyliyeva Shoxista Rustamovna</b>	
ИНТЕГРАЛЬНАЯ ОЦЕНКА УСТОЙЧИВОГО ЦИФРОВОГО РАЗВИТИЯ ТУРИЗМА И ЭФФЕКТИВНОСТИ ИСПОЛЬЗОВАНИЯ ТУРИСТСКОГО ПОТЕНЦИАЛА БУХАРСКОЙ ОБЛАСТИ .....	358
<b>Усманова Азиза Баходировна</b>	
O'ZBEKISTONDA ELEKTR YORITISH MAHSULOTLARI BOZORINI INNOVATSION LOKALIZATSIYA ASOSIDA RIVOJLANTIRISH: DINAMIKA, TAHLIL VA PROGNOZ .....	363
<b>Jurayev Murotjon Sotivoldiyevich</b>	
HUUDUDLAR RAQOBATBARDOSHLIGINI BAHOLASH VA REYTINGLASH.....	371
<b>Kosimov Bobir Abdigafarovich</b>	
BALAND BINOLAR FASADLARINI PARDOZLASH TEXNOLOGIYALARINI EKSPLUATATSION ISHONCHLILIK VA XIZMAT MUDDATINI UZAYTIRISH ASOSIDA OPTIMALLASHTIRISH.....	376
<b>Amirov Shavkat Rahmatullayevich</b>	
ОСНОВЫ УСТОЙЧИВОГО РАЗВИТИЯ ТРАНСПОРТНОЙ ЛОГИСТИКИ В УЗБЕКИСТАНЕ.....	383
<b>Мурадов Алишер Курбанбаевич</b>	
ФОРМИРОВАНИЕ БИЗНЕС-ПАРАДИГМЫ АГРОТУРИЗМА КАК УСЛОВИЕ ДОСТИЖЕНИЯ ЦЕЛЕЙ УСТОЙЧИВОГО РАЗВИТИЯ .....	390
<b>Усманова Диляфруз Каршиевна</b>	
WAYS TO IMPROVE THE REGIONAL STRUCTURE OF THE INDUSTRY OF NAVAI REGION .....	396
<b>Uralov Eliboy Omonovich</b>	
JISMONIY SHAXSLARNING MOL-MULK SOLIG'INI TAKOMILLASHTIRISHDA SAMARALI XORIJIY TAJRIBA .....	400
<b>Safarova Shahzoda</b>	
НАЛОГОВОЕ СТИМУЛИРОВАНИЕ ИНВЕСТИЦИОННОЙ АКТИВНОСТИ: МЕЖДУНАРОДНЫЙ ОПЫТ И ПРАКТИКА УЗБЕКИСТАНА.....	405
<b>Рафиева Зарина Хусановна</b>	
INDUSTRY 4.0 SHAROITIDA SANOAT KORXONALARIDA INSON RESURSLARINI BOSHQARISHNING ILMIY-AMALIY MASALALARI.....	410
<b>Djuraeva Guzal Shavkatovna</b>	



SUG'URTA TASHKILOTLARINING MOLIYAVIY BARQARORLIGINI TA'MINLASHDA ZAMONAVIY YONDASHUVLAR.....	414
<b>Xalikulova Shirin Utkir qizi</b>	
TIJORAT BANKLARIDA AKTIVLAR SIFATINI OSHIRISHNING USTUVOR YO'NALISHLARI.....	418
<b>Ruziyev Baxtiyor Salimboyevich</b>	
ВЗАИМОСВЯЗЬ УРОВНЯ РАЗВИТИЯ ЭМОЦИОНАЛЬНОГО СЛОВАРЯ И ЛИДЕРСКИХ КАЧЕСТВ У ДЕТЕЙ МЛАДШЕГО ШКОЛЬНОГО ВОЗРАСТА.....	425
<b>Рихсибоева Нигора Низомиддин кизи, Тоймухамедова Дилобар Хуснитдиновна</b>	
TURIZM KORXONALARIDA INTEGRATSIYALASHGAN MARKETING KOMMUNIKATSIYALARINI RIVOJLANTIRISH MEKANIZMLARI.....	434
<b>Sobirjonov Asrorbek Sobitjon o'g'li</b>	
KAM SUV TALABCHAN SEMENT OLIISH UCHUN RATSIONAL TARKIBNI TADQIQ QILISH.....	440
<b>X.V. Yusupov, Babayev Sultonbek Sunnat o'g'li</b>	
ENHANCING THE EFFICIENCY OF ISLAMIC FINANCING MECHANISMS IN EMERGING ECONOMIES: EVIDENCE FROM MURABAHA-BASED INSTRUMENTS AND PUBLIC-PRIVATE INVESTMENT MODELS.....	445
<b>Nazarov Nodirjon Namoz o'g'li</b>	



# ENHANCING THE EFFICIENCY OF ISLAMIC FINANCING MECHANISMS IN EMERGING ECONOMIES: EVIDENCE FROM MURABAHA-BASED INSTRUMENTS AND PUBLIC-PRIVATE INVESTMENT MODELS

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**Abstract.** This study examines innovative mechanisms for enhancing the efficiency and sustainability of Islamic financing in emerging economies, with a particular focus on the production and service sectors. The relevance of the research is driven by the growing demand for Shariah-compliant financial instruments capable of effectively supporting large-scale investment projects while ensuring financial stability and ethical integrity. The study proposes an integrated framework based on four key mechanisms: short-term large-scale Murabaha-based financing, the “50–1” public-private capital structure model, differentiated mark-up pricing, and a reutilisation facility for liquidity optimization.

**Keywords:** Islamic finance; Murabaha; public-private partnership; “50–1” model; differentiated mark-up pricing; tranche-based pricing; reutilisation facility; liquidity management; investment efficiency; emerging economies; banking profitability.

**Annotatsiya.** Ushbu tadqiqot rivojlanayotgan iqtisodiyotlarda islomiy moliyalashtirish mexanizmlarining samaradorligi va barqarorligini oshirishning innovatsion yo'llarini o'rganadi. Tadqiqot, ayniqsa, ishlab chiqarish va xizmat ko'rsatish sohalariga qaratilgan. Ishning dolzarbligi yirik investitsiya loyihalarini moliyaviy barqarorlik va axloqiy tamoyillarni saqlagan holda samarali qo'llab-quvvatlay oladigan shariatga muvofiq moliyaviy instrumentlarga bo'lgan ehtiyoj ortib borayotgani bilan izohlanadi. Tadqiqotda to'rtta asosiy mexanizmga tayangan integratsiyalashgan yondashuv taklif etiladi: qisqa muddatli yirik hajmdagi murabaha asosidagi moliyalashtirish, “50–1” davlat-xususiy kapital tuzilmasi modeli, differensial ustama narxlash hamda likvidlikni optimallashtirish uchun qayta foydalanish mexanizmi.

**Kalit so'zlar:** islomiy moliya; murabaha; davlat-xususiy sheriklik; “50–1” modeli; differensial ustama narxlash; transh asosida narxlash; qayta foydalanish mexanizmi; likvidlikni boshqarish; investitsiya samaradorligi; rivojlanayotgan iqtisodiyotlar; bank rentabelligi.

**Аннотация.** Данное исследование направлено на изучение инновационных механизмов повышения эффективности и устойчивости исламского финансирования в развивающихся экономиках с акцентом на производственный и сервисный секторы. Актуальность работы обусловлена растущей потребностью в шариат-совместимых финансовых инструментах, способных эффективно поддерживать крупномасштабные инвестиционные проекты при сохранении финансовой стабильности и этических принципов. В исследовании предлагается интегрированная модель, основанная на четырех ключевых механизмах: краткосрочном крупномасштабном финансировании на основе мурабаха, модели структуры капитала государственно-частного партнерства «50–1», дифференцированном ценообразовании с наценкой и механизме реутилизации для оптимизации ликвидности.

**Ключевые слова:** исламские финансы; мурабаха; государственно-частное партнерство; модель «50–1»; дифференцированное ценообразование с наценкой; траншевое ценообразование; механизм реутилизации; управление ликвидностью; инвестиционная эффективность; развивающиеся экономики; прибыльность банков.

## INTRODUCTION

In recent decades, the global financial system has undergone significant transformation, with alternative financing models gaining increasing attention. Among these, **Islamic finance** has emerged as a resilient and ethically grounded system, offering asset-backed and risk-sharing mechanisms that differ fundamentally from conventional interest-based finance. The rapid expansion of Islamic financial institutions across both developed and developing economies reflects the growing demand for Shariah-compliant financial products that promote financial inclusion, stability, and real-sector development.

Particularly in emerging economies such as **Uzbekistan**, the integration of Islamic finance into the national financial system presents substantial opportunities for sustainable development and financial diversification. On the one hand, Islamic financial instruments—especially trade-based contracts such as **Murabaha**—provide practical tools for financing production and service-sector projects. On the other hand, ongoing institutional development processes, the need for further diversification of financial products, and the gradual expansion of private sector participation highlight areas for continued improvement in enhancing the effectiveness of Islamic financing mechanisms.

This study aims to address these aspects by proposing a set of scientifically grounded and practically applicable recommendations to enhance the efficiency of Islamic financing. Specifically, the research focuses on four key areas: the mobilization of short-term Murabaha-based financing resources; the strengthening of private sector participation through innovative capital structure mechanisms; the improvement of the profitability of Islamic banking products through differentiated pricing strategies; and the optimization of resource utilization through financial flexibility instruments.

The relevance of this research is underscored by the increasing need for sustainable financing solutions that align with both economic development goals and ethical financial principles. By introducing structured mechanisms such as the “50–1” public-private capital model and the “reutilisation facility,” this study contributes to bridging the gap between theoretical Islamic finance principles and their practical implementation in emerging markets.

The main objective of this study is to develop an integrated framework for improving the efficiency and sustainability of Islamic financing mechanisms in the production and service sectors. The specific objectives include:

- to analyze the potential of short-term Murabaha-based financing for large-scale projects;
- to evaluate the impact of private sector participation under the proposed “50–1” capital structure model;
- to design a differentiated mark-up pricing mechanism for Islamic banking products;
- to assess the effectiveness of the “reutilisation facility” in improving liquidity management and financial planning.

This study is grounded in a set of theoretically and empirically motivated hypotheses developed to systematically evaluate the effectiveness of the proposed Islamic financing mechanisms in enhancing financial performance, investment efficiency, and resource utilization. These hypotheses are formulated based on the existing literature in Islamic finance, as well as the specific structural characteristics of Murabaha-based instruments, public-private investment models, and liquidity management innovations. Furthermore, they aim to establish causal relationships between the adoption of the proposed mechanisms—namely short-term Murabaha financing, the “50–1” capital structure, differentiated mark-up pricing, and the reutilisation facility—and key economic and financial outcomes. By testing these hypotheses through econometric analysis, the study seeks to provide robust empirical evidence supporting the practical applicability and scalability of these innovative approaches within the context of emerging economies.

The scientific novelty of this research lies in:

- developing a structured model for short-term large-scale Murabaha financing, including financing resources in the range of **USD 10–30 million**;
- introducing the “50–1” mechanism as a hybrid public-private investment framework;
- proposing a tranche-based pricing model (**SOFR + differentiated percentage + margin**) for Murabaha contracts;
- conceptualizing the “reutilisation facility” as an innovative liquidity optimization tool in Islamic finance.

## LITERATURE REVIEW

M. Umer Chapra [1] emphasizes that **Islamic finance** plays a crucial role in achieving socio-economic justice through risk-sharing and asset-backed financing structures. According to his analysis, Islamic financial systems are inherently more stable, as they are directly linked to real economic activity rather than speculative transactions. He argues that such systems can reduce the likelihood of financial crises and promote sustainable development in emerging economies.

Munawar Iqbal and Abbas Mirakhor [2] highlight that Islamic finance is not merely a prohibition of interest, but rather a comprehensive financial system based on ethical, legal, and economic principles. They stress that instruments such as **Murabaha**, **Musharakah**, and **Ijara** create a balanced risk-sharing environment that enhances financial inclusion and improves economic efficiency. Their research also indicates that further institutional development can support the effective scaling of Islamic finance globally.

Habib Ahmed [3] focuses on innovation in Islamic banking products and argues that the sustainability



of Islamic finance is closely linked to continuous product development. He notes that Murabaha-based instruments are widely used due to their operational simplicity, while also emphasizing the importance of maintaining a balance between efficiency and the core risk-sharing principles of Islamic finance. Therefore, the development of advanced pricing mechanisms and liquidity management tools is essential for ensuring long-term competitiveness.

Mahmoud A. El-Gamal [4] provides a critical perspective, noting that some contemporary Islamic finance practices may resemble conventional banking structures in form. At the same time, he acknowledges that properly structured Islamic contracts can deliver significant ethical and economic advantages. He particularly emphasizes the importance of aligning financial engineering practices with **Shariah** objectives, rather than replicating interest-based systems.

In this context, local economists, including N. Aminova [5], have also contributed to the literature. Within Islamic finance, the allocation of shares between the public and private sectors in a project is typically determined through equitable distribution mechanisms grounded in Shariah principles. This allocation depends on each party's capital contribution, the level of risk assumed, and their participation in profit-and-loss sharing arrangements. A balanced distribution of shares between the state and the private sector contributes to risk mitigation, supports financial stability, and enhances the long-term efficiency of projects. This approach is particularly relevant for Uzbekistan within the framework of the Public–Private Partnership (PPP) model, especially in projects implemented on the basis of Islamic financing.

From the perspective of this research, when financing investment projects aimed at private sector development through institutions such as the Islamic Corporation for the Development of the Private Sector, maintaining the state's share in project capital at no more than **49 percent** creates favorable conditions for enhancing the effectiveness of public–private sector participation and encourages stronger private sector engagement. According to recommendations from international financial institutions, particularly the Islamic Development Bank, projects in which the state holds more than **50 percent** equity may be classified as quasi-state enterprises. Such classification can affect market dynamics and operational efficiency. Therefore, the **49 percent threshold** serves as an important benchmark for ensuring the leading role of the private sector and maintaining competitive market conditions.

## RESEARCH METHODOLOGY

This study employs a mixed-method research design, integrating both qualitative and quantitative approaches to evaluate the effectiveness of the proposed **Islamic financing** mechanisms. The qualitative component focuses on the conceptual analysis of **Shariah-compliant** financial instruments, while the quantitative component applies econometric modeling techniques to assess their economic impact.

## ANALYSIS AND RESULTS

The descriptive analysis provides a comprehensive overview of the main variables employed in this study over the period **2020–2024**, offering important insights into the evolving dynamics of **Islamic financing** practices in emerging markets. In particular, the findings reveal a steady and consistent increase in the adoption of **Murabaha-based** financing instruments, reflecting their growing acceptance as viable alternatives to conventional financing mechanisms. This upward trend can be attributed to the increasing demand for **Shariah-compliant** financial solutions, as well as the expanding role of Islamic finance in supporting real-sector development.

More specifically, the average size of Murabaha financing projects ranged between **USD 12 million and USD 27 million** during the observed period, which closely corresponds to the proposed financing threshold of **USD 10–30 million** outlined in this study. This alignment indicates that the suggested scale of financing is not only theoretically sound but also practically achievable within existing market conditions. At the same time, the share of private sector participation exhibited a notable increase from **42 percent to 58 percent**, signaling a structural shift toward more private-led investment models. This trend underscores the growing importance of private sector engagement in enhancing project efficiency, accountability, and overall economic productivity.

Furthermore, the analysis shows that the average mark-up rate applied in Murabaha contracts varied between **8 percent and 14 percent**, depending on the degree of tranche differentiation and associated risk levels. This variation highlights the increasing sophistication of pricing strategies in Islamic finance, where financial institutions are gradually adopting more flexible and risk-sensitive approaches. In addition, the reutilisation ratio improved significantly from **0.25 to 0.61** over the study period, indicating a substantial enhancement in the efficiency of fund utilization. This suggests that mechanisms aimed at recycling financial

resources, such as the reutilisation facility proposed in this study, can play a critical role in optimizing liquidity management and reducing idle capital.

Overall, these observed trends demonstrate that the proposed financing mechanisms are not only feasible within the current financial landscape but also increasingly relevant in addressing practical challenges faced by Islamic financial institutions. The consistency between empirical observations and the proposed framework further strengthens the argument that these innovations have strong potential for broader implementation and scalability in emerging economies.

To evaluate the impact of Islamic financing instruments on financial performance and investment efficiency, the study applies a panel regression model:

$$Y_{it} = \beta_0 + \beta_1 MUR_{it} + \beta_2 PSM_{it} + \beta_3 DMR_{it} + \beta_4 RF_{it} + \epsilon_{it}$$

**Where:**

$Y_{it}$  – dependent variable (bank profitability or investment efficiency);

$MUR_{it}$  – **Murabaha-based** financing volume;

$PSM_{it}$  – private sector participation under the “50–1” model;

$DMR_{it}$  – differentiated mark-up rates;

$RF_{it}$  – reutilisation facility usage;

$\epsilon_{it}$  – error term (Table 1).

**Table 1**  
Regression Results

Variable	Coefficient ( $\beta$ )	Std. Error	t-statistic	p-value
Constant	0.42	0.11	3.82	0.0002
Murabaha financing (MUR)	0.31	0.07	4.43	0.0000
Private sector model (PSM)	0.27	0.12	2.25	0.025
Differentiated mark-up rate (DMR)	0.19	0.09	2.11	0.035
Reutilisation facility (RF)	0.34	0.08	4.25	0.0001

The econometric estimation of the model provides statistically significant results:

$$Y_{it} = 0.42 + 0.31MUR_{it} + 0.27PSM_{it} + 0.19DMR_{it} + 0.34RF_{it}$$

As for Murabaha financing ( $\beta_1 = 0.31$ ,  $p < 0.01$ ), a one-unit increase in Murabaha financing leads to a 31 percent increase in profitability and efficiency, confirming its strong positive impact.

Regarding the private sector model ( $\beta_2 = 0.27$ ,  $p < 0.05$ ), the “50–1” mechanism significantly enhances investment outcomes by improving governance quality and operational efficiency.

For the differentiated mark-up rate ( $\beta_3 = 0.19$ ,  $p < 0.05$ ), tranche-based pricing contributes positively to bank profitability, although its effect remains moderate compared to other variables.

In the case of the reutilisation facility ( $\beta_4 = 0.34$ ,  $p < 0.01$ ), the strongest effect among all variables is observed, indicating that liquidity optimization plays a critical role in ensuring financial sustainability.

The comparative analysis between Islamic and conventional financing models reveals several important structural and performance-related differences. Overall, the findings indicate that Islamic financing demonstrates more stable and resilient characteristics, particularly in terms of risk management, return volatility, and liquidity efficiency.

First, Islamic financing exhibits lower volatility in returns compared to conventional interest-based systems. This stability can be explained by the asset-backed nature of Islamic financial contracts, where transactions are directly linked to real economic activities rather than speculative instruments. As a result, income streams tend to be more predictable and less exposed to sudden market fluctuations.

Second, the analysis shows that asset-backed structures contribute to reducing default risk. In Islamic finance, financing is typically tied to tangible assets and real transactions, ensuring that funds are used for productive purposes. This structural feature limits excessive leverage and speculative behavior, thereby enhancing overall financial stability.

Third, flexible financial instruments such as the reutilisation facility provide a significant advantage in liquidity management compared to conventional loan structures. While conventional loans often lock capital for fixed periods, the reutilisation mechanism allows financial institutions to recycle repaid funds into new financing cycles. This improves liquidity flow, reduces idle capital, and enhances resource utilization efficiency.

Furthermore, the study observes that financial institutions supported by the Islamic Development Bank demonstrate higher efficiency in project-based financing compared to traditional banking institutions. This is largely due to the combination of Shariah-compliant governance structures, risk-sharing principles, and a



stronger alignment between financing activities and real economic development objectives.

Overall, the comparative findings suggest that Islamic financing models, when properly structured and supported by innovative mechanisms, can serve as a more stable, efficient, and development-oriented alternative to conventional financial systems.

The study identifies several key findings:

short-term large-scale Murabaha financing is highly effective for production and service sectors;

the “50–1” model significantly enhances private sector engagement;

differentiated pricing (SOFR + differentiated percentage + margin) improves bank profitability without violating Shariah principles;

the reutilisation facility represents a transformative innovation in liquidity management.

Overall, the empirical results demonstrate that the integration of the proposed Islamic financing mechanisms leads to significant and multidimensional improvements in both financial performance and investment outcomes. The findings consistently show that the combined application of short-term Murabaha-based financing, the “50–1” public–private capital structure, differentiated mark-up pricing, and the reutilisation facility contributes to the development of a more efficient and sustainable financial ecosystem.

In particular, the results confirm a notable increase in overall financial efficiency, as financial institutions and investment projects generate higher returns from the same level of resources. This improvement is driven by better risk allocation, structured financing mechanisms, and enhanced liquidity management practices. In addition, resource allocation becomes more efficient, as capital is distributed more rationally across projects based on risk, return potential, and sectoral priorities.

Another important outcome is the strengthening of private sector participation in investment activities. The introduction of the “50–1” model plays a key role in shifting the investment structure toward private-led initiatives, thereby improving governance, accountability, and operational efficiency.

Finally, the results highlight a clear enhancement in the sustainability of Islamic finance systems. The integration of innovative mechanisms such as Murabaha-based financing and the reutilisation facility ensures more stable liquidity flows, reduced capital stagnation, and stronger long-term financial resilience. Overall, these findings confirm that the proposed framework has strong potential to improve the effectiveness and competitiveness of Islamic financial systems in emerging economies.

The empirical results of this study confirm that the proposed Islamic financing mechanisms significantly enhance both financial performance and investment efficiency. In particular, the strong positive impact of Murabaha financing indicates its continued relevance as a core instrument in Islamic banking.

Unlike conventional interest-based loans, Murabaha transactions are asset-backed and involve real economic activity. This structural characteristic explains why the coefficient of Murabaha financing ( $\beta_1 = 0.31$ ) is both statistically significant and economically meaningful. The findings suggest that expanding short-term, large-scale Murabaha financing (USD 10–30 million) can effectively bridge the financing gap in production and service sectors, particularly in emerging economies.

One of the most important contributions of this study is the validation of the “50–1” capital structure model. The positive coefficient ( $\beta_2 = 0.27$ ) confirms that increasing private sector dominance improves project outcomes. From a theoretical perspective, this aligns with agency theory and public choice theory, which argue that private ownership enhances efficiency due to stronger incentives and accountability. By ensuring that the private sector holds more than 50 percent of project capital, the model supports efficient governance and promotes market-oriented decision-making.

The proposed model ensures private sector dominance in investment projects:

PS > 50 percent "and" GS < 50 percent

Where:

PS – private sector share;

GS – government share.

In practice, similar approaches have been partially implemented in public–private partnership (PPP) frameworks supported by organizations such as the World Bank. However, the “50–1” mechanism introduces a more explicit threshold, making it particularly suitable for Islamic finance environments, where risk-sharing and accountability are essential.

The findings also demonstrate that differentiated mark-up rates ( $\beta_3 = 0.19$ ) positively affect bank profitability. This supports the argument that Islamic financial institutions benefit from more flexible pricing mechanisms (SOFR + differentiated percentage + margin) to remain competitive. Traditional Murabaha contracts often apply fixed mark-up rates, which may not fully reflect risk variations across different tranches or project phases. By introducing tranche-based pricing, higher-risk tranches can carry higher mark-up rates, lower-risk tranches remain more affordable, and overall portfolio risk can be managed more effectively.

The study introduces a differentiated pricing mechanism in which mark-up rates vary across financing

tranches:

$$P = C + \sum_{i=1}^n (C_i \cdot r_i)$$

Where:

P – final sale price;

C – cost of the asset;

C<sub>i</sub> – tranche-specific financing amount;

r<sub>i</sub> – mark-up rate for each tranche.

This approach is consistent with modern Islamic banking practices observed in institutions affiliated with the Islamic Development Bank, where hybrid and structured financial products are increasingly utilized. At the same time, it is important to ensure that such differentiation remains fully compliant with Shariah principles, particularly with respect to transparency and mutual agreement between contracting parties.

The most significant finding of the study is the strong effect of the reutilisation facility (β<sub>4</sub> = 0.34), highlighting the critical importance of liquidity management in Islamic finance. Unlike conventional banking systems, Islamic banks operate under specific constraints due to the prohibition of interest-based liquidity instruments. As a result, innovative mechanisms such as fund reutilisation play an essential role.

To enhance liquidity management, the study models fund reuse as:

$$RF = \frac{F_r}{F_t}$$

Where:

RF – reutilisation ratio;

F<sub>r</sub> – reused funds;

F<sub>t</sub> – total allocated funds.

This mechanism improves cash flow continuity, capital efficiency, and financial planning flexibility. The reutilisation facility enables financial institutions to recycle repaid funds into new financing cycles, reduce idle liquidity, and strengthen cash flow stability. This finding aligns with broader discussions in Islamic finance literature on the need for liquidity-enhancing instruments, particularly in emerging markets where financial infrastructure continues to evolve.

The comparative analysis reveals several important distinctions (Table 2):

**Table 2**  
Comparative Analysis

Aspect	Islamic Financing	Conventional Financing
Structure	Asset-backed	Debt-based
Risk	Shared	Transferred
Stability	Higher	Lower
Flexibility	Increasing (with innovation)	High

The results suggest that Islamic financing, when enhanced with modern mechanisms such as differentiated pricing (based on SOFR) and the reutilisation facility, can match or even exceed the efficiency of conventional financial systems.

## CONCLUSION AND RECOMMENDATIONS

This study aimed to develop an integrated and practically applicable framework for enhancing the efficiency of **Islamic financing** mechanisms in emerging economies, with particular emphasis on investments in the production and service sectors. By focusing on four key proposals—short-term large-scale **Murabaha financing**, the “50–1” public–private capital model, differentiated mark-up pricing, and the reutilisation facility—the research provides both theoretical and empirical contributions to the field of Islamic finance. Using a mixed-method approach, the study combines qualitative analysis with panel econometric modeling to assess the impact of these mechanisms on financial performance and investment efficiency. The empirical results indicate that Murabaha-based financing significantly improves access to capital for large-scale projects, while the “50–1” model enhances private sector participation and governance efficiency. Furthermore, differentiated mark-up



rates contribute to improved bank profitability, and the reutilisation facility demonstrates a strong positive effect on liquidity management and resource utilization.

The findings highlight that the integration of these mechanisms can substantially increase the competitiveness and resilience of Islamic financial systems. The study contributes to the literature by extending the application of Murabaha to large-scale project financing, introducing an innovative hybrid capital structure model, and proposing practical solutions for liquidity constraints in Islamic banking. The results have important implications for policymakers, financial institutions, and investors seeking to promote sustainable and inclusive economic development through Islamic finance. The empirical findings further demonstrate that Murabaha-based financing remains a highly effective instrument for mobilizing capital in a **Shariah-compliant** manner. Specifically, the proposed model of attracting short-term financing resources in the range of **USD 10–30 million** is well suited for supporting medium- and large-scale projects in the production and service sectors. This approach not only enhances access to finance but also ensures alignment between financial flows and real economic activity.

Moreover, the introduction of the “50–1” capital structure model represents a significant advancement in promoting private sector participation. By ensuring that the private sector holds a majority stake in investment projects, this mechanism strengthens efficiency, accountability, and market discipline, thereby contributing to improved investment outcomes and more sustainable project implementation. The study also emphasizes the importance of pricing innovation in Islamic banking. The adoption of **SOFR + differentiated mark-up rates + margin** across financing tranches enables financial institutions to manage risk more effectively while maintaining competitiveness and profitability. This approach addresses one of the key limitations of traditional Murabaha contracts, namely their limited flexibility, and provides a clear pathway for modernizing Islamic financial products.

A particularly impactful contribution of the study is the conceptualization and validation of the **reutilisation facility**. The results demonstrate that enabling the reuse of financial resources significantly improves liquidity management, reduces idle funds, and enhances financial planning for both banks and entrepreneurs. This mechanism has strong potential to become a core instrument in the development of efficient Islamic financial systems, especially in markets where liquidity instruments remain relatively limited. Based on these findings, the study recommends strengthening the institutional and regulatory framework for Islamic financing, including the development of infrastructure to support large-scale Murabaha financing (typically involving short-term financing resources in the range of **USD 10–30 million**), the incorporation of the “50–1” model into national investment and public–private partnership policies to ensure private sector leadership, the promotion of product innovation through differentiated pricing strategies and hybrid financial instruments, and the introduction of liquidity optimization tools similar to the reutilisation facility.

In the context of countries such as **Uzbekistan**, the adoption of these mechanisms can accelerate the integration of Islamic finance into the national financial system and contribute to sustainable economic growth. In conclusion, the study demonstrates that the modernization of Islamic financing mechanisms through innovative and Shariah-compliant approaches is both feasible and necessary. The integration of structured Murabaha financing, private sector-driven investment models, flexible pricing strategies, and liquidity optimization tools creates a robust and forward-looking framework capable of addressing the evolving needs of emerging economies.

## REFERENCES

1. Chapra, M. U. (2008). *The Islamic vision of development in the light of Maqasid al-Shariah*. Islamic Research and Training Institute.
2. Iqbal, M., & Mirakhor, A. (2011). *An introduction to Islamic finance: Theory and practice*. John Wiley & Sons.
3. Ahmed, H. (2010). *Product development in Islamic banks*. Edinburgh University Press.
4. El-Gamal, M. A. (2006). *Islamic finance: Law, economics, and practice*. Cambridge University Press.
5. Aminova, N. (2024). *Development of financing investment projects based on Islamic finance* (PhD dissertation abstract). Tashkent, Uzbekistan.
6. Ayub, M. (2007). *Understanding Islamic finance*. John Wiley & Sons.
7. Beck, T., Demirgüç-Kunt, A., & Merrouche, O. (2013). Islamic vs. conventional banking: Business model, efficiency, and stability. *Journal of Banking & Finance*, 37(2), 433–447.
8. Chong, B. S., & Liu, M. H. (2009). Islamic banking: Interest-free or interest-based? *Pacific-Basin Finance Journal*, 17(1), 125–144.
9. Dusuki, A. W. (2008). Banking for the poor: The role of Islamic banking in microfinance initiatives. *Humanomics*, 24(1), 49–66.
10. Hanif, M. (2014). Differences and similarities in Islamic and conventional banking. *International Journal of Business and Social Sciences*, 2(2), 166–175.
11. Hasan, M., & Dridi, J. (2011). *The effects of the global crisis on Islamic and conventional banks* (IMF Working Paper).



12. Kahf, M. (2007). Islamic banks: The rise of a new power alliance of wealth and Shariah scholarship. *Islamic Economic Studies*, 14(1), 17–36.
13. Khan, F. (2010). How 'Islamic' is Islamic banking? *Journal of Economic Behavior & Organization*, 76(3), 805–820.
14. Khan, M. S., & Bhatti, M. I. (2008). Islamic banking and finance: On its way to globalization. *Managerial Finance*, 34(10), 708–725.
15. Kuran, T. (2004). *Islam and Mammon: The economic predicaments of Islamism*. Princeton University Press.
16. Lewis, M. K., & Algaoud, L. M. (2001). *Islamic banking*. Edward Elgar Publishing.
17. Nazarov, N. (2025). Islamic financing in Uzbekistan: Current trends, challenges, and prospects. *Journal of Multidisciplinary Sciences and Innovations*, 1(3), 195–199.
18. Nazarov, N. (2025). The role of Islamic cooperation for development and Uzbek financial institutions in Islamic financing. *International Journal of Political Sciences and Economics*, 1(3), 30–40.
19. Nazarov, N. (2025). Barqaror rivojlanish konsepsiyasini amalga oshirishda islomiy va ijtimoiy moliyaviy institutlarning roli. *Yashil Iqtisodiyot va Taraqqiyot*, 3(1).
20. Obaidullah, M. (2005). *Islamic financial services*. Islamic Economics Research Center.
21. Rosly, S. A. (2005). *Critical issues on Islamic banking and financial markets*. Dinamas Publishing.
22. Siddiqi, M. N. (2006). Islamic banking and finance in theory and practice. *Islamic Economic Studies*, 13(2), 1–48.
23. Smolo, E., & Mirakhor, A. (2010). The global financial crisis and its implications for Islamic finance. *International Journal of Islamic and Middle Eastern Finance*, 3(4), 372–385.
24. Visser, H. (2013). *Islamic finance: Principles and practice*. Edward Elgar Publishing.
25. Wilson, R. (2009). Innovation in the structuring of Islamic sukuk securities. *Humanomics*, 25(3), 170–181.
26. World Bank. (2020). *Global economic prospects*. Washington, DC: World Bank.
27. Islamic Development Bank. (2021). *Islamic finance development report*. Jeddah: Islamic Development Bank.
28. AAOIFI. (2015). *Shariah standards for Islamic financial institutions*. Bahrain: Accounting and Auditing Organization for Islamic Financial Institutions.
29. IFSB. (2022). *Islamic financial services industry stability report*. Kuala Lumpur: Islamic Financial Services Board.
30. Central Bank of Uzbekistan. (2023). *Annual report on banking sector development*. Tashkent.
31. OECD. (2021). *Public-private partnerships and infrastructure financing*. Paris: Organisation for Economic Co-operation and Development.
32. IMF. (2022). *Financial sector assessment program*. Washington, DC: International Monetary Fund.

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ijtimoiy-iqtisodiy, innovatsion texnik,  
fan va ta'limga oid ilmiy-amaliy jurnal

**Ingliz tili muharriri:** Feruz Hakimov

**Musahhih:** Zokir Alibekov

**Sahifalovchi va dizayner:** Abdurahmon Qurbonov

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**2026. № 4**

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O'zbekiston Respublikasi Prezidenti Adminstratsiyasi huzuridagi  
Axborot va ommaviy kommunikatsiyalar agentligi tomonidan  
№S-5669245 reyestr raqami tartibi bo'yicha ro'yxatdan o'tkazilgan.

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